

## WHAT IS CLAIMED IS

1. A heat distributor adapted to be mounted to an electrical connector having an insulation housing defining cells that receive and retain therein conductive contacts each carrying soldering material to be soldered to a circuit board for uniformly transferring heat to/from the contacts during a soldering process, the heat distributor comprising:
  - a base plate made of thermally conductive material, the base plate having a bottom face adapted to be positioned on the housing and an opposite top face; and
  - a plurality of thermally conductive pins extending from the bottom face of the base plate;wherein the pins are arranged in accordance with the cells and are insertable into the cells to physically engage the contacts for transferring heat to the contacts and the soldering material.
2. The heat distributor as claimed in Claim 1, wherein the base plate and the pins are made of metals.
3. The heat distributor as claimed in Claim 1, wherein the base plate defines a plurality of apertures for controlling heat absorbed thereby.
4. The heat distributor as claimed in Claim 1 further comprising a plurality of fins extending from the top face of the base plate.
5. The heat distributor as claimed in Claim 1, wherein the base plate has a surface area substantially corresponding to a top face of the connector housing.

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6. The heat distributor as claimed in Claim 1, wherein the base plate has a surface area substantially smaller than a top face of the connector housing.
7. An electrical system comprising:
  - a circuit board with conductive traces formed thereon;
  - an electrical connector comprising an insulation portion and conductive members retained in the insulation portion, each conductive member comprising a tail section corresponding to one of the conductive traces of the circuit board;
  - soldering pre-forms arranged between the conductive traces and the tail sections of the conductive members; and
  - a heat distributor attached to the connector and comprising conductive pins thermally engaging the conductive members of the connector so as to uniformly transfer heat to/from the soldering pre-forms.
8. An electrical system comprising:
  - a circuit board with conductive traces formed thereon;
  - an electrical connector comprising an insulation portion with an array of cells defined therein, each cell receiving and retaining a conductive member, the conductive members having tail sections corresponding to the conductive traces of the circuit board;
  - soldering pre-forms arranged between the conductive traces and the tail sections of the conductive members; and
  - a heat distributor attached to the connector and comprising conductive pins thermally engaging selected ones of the conductive members of the connector for creating a homogeneous heat transfer

to/from the soldering performs thereby eliminating heat difference between the soldering performs.

9. A method for providing homogeneous heat transfer among soldering pre-forms arranged between conductive contacts of an electrical connector and conductive traces formed on a circuit board, the method comprising the following steps:
- (a) providing a circuit board having conductive traces formed thereon;
  - (b) providing an electrical connector comprising conductive contacts with soldering pre-forms attached to the contacts and corresponding to the conductive traces of the circuit board;
  - (c) providing a heat distributor comprising a thermally conductive base plate and thermally conductive pins extending from the base plate; and
  - (d) attaching the heat distributor to the electrical connector with the pins of the heat distributor thermally engaging the contacts of the connector so as to create a homogeneous heat transfer among the soldering pre-forms.

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